



BADGER STATE Smoke Signals



Serving Amateur Radio in Wisconsin

Published Monthly Since 1969

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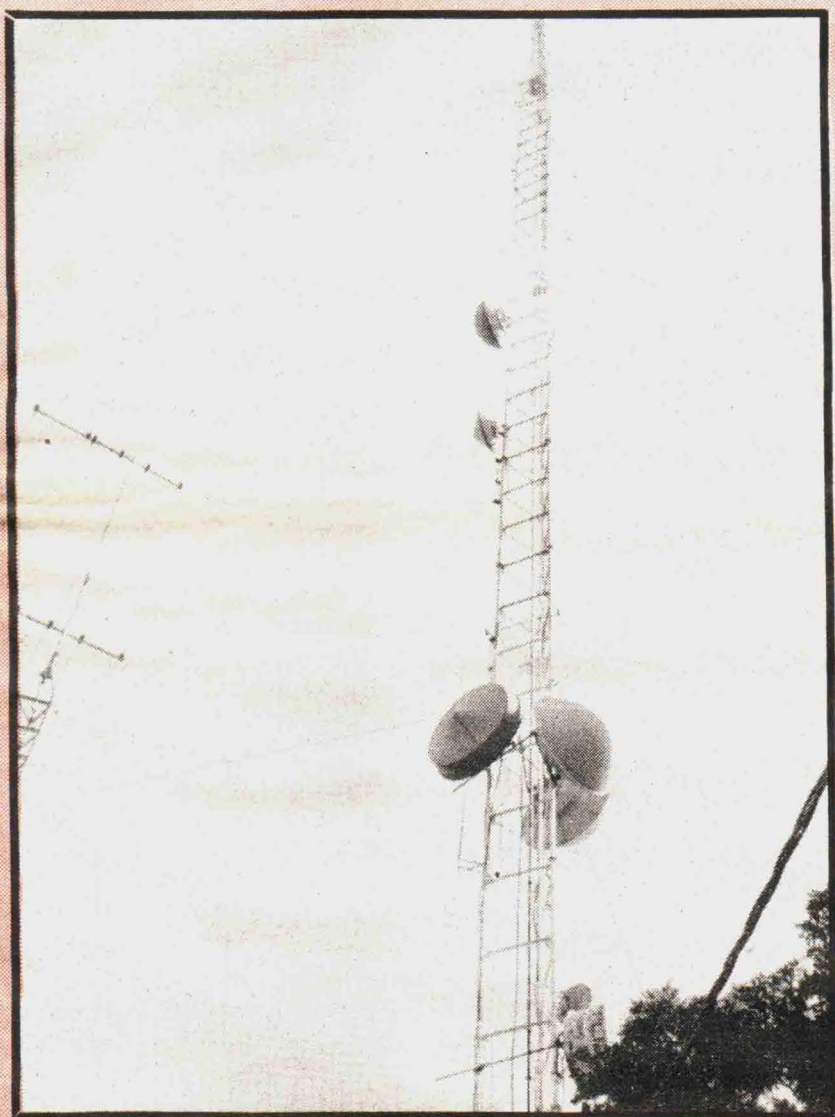
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The Big Signal from Delafield



On this tower is the antenna for the 146.22/82 repeater at Delafield, Wisconsin. For the full story on the S.E.W.-F.A.R.S. repeater, see "Repeater Profiles" by John Frank, WB9TQG, on page 10 of this issue.

FCC Proposes Part 15 Changes

The FCC, in Docket 87-389, has proposed to amend Part 15 of its Rules which permit unlicensed operation of very low power RF devices such as remote control units, wireless microphones and cordless telephones.

While use of these items does not require a license, Part 15 specifies the technical standards for these devices to prevent interference to other radio services.

In this Docket, the FCC proposes to permit a general class of RF devices with greatly increased frequencies of operation and no restrictions on type of usage, bandwidth or modulation type.

Under the new proposals, these devices would be allowed virtually everywhere, except for a few restricted bands used for public safety, or to radio services such as radio astronomy or satellite downlinks, which utilize very weak signal levels.

The original Part 15 regulations were based on a general field strength standard. As devices were designed to operate on higher frequencies, this standard was found to be too restrictive. Over the years, Part 15 was amended by taking a "device-specific" approach. That is, in re-

sponse to petitions, the rules were amended to permit a specific RF device. By taking this approach, a number of inconsistencies and inequities in the technical standards contained in Part 15 developed. Additionally, the standards changed over the years due to improvements in equipment, such as receiver sensitivity, increased proliferation of radio services, and changes to frequency allocations of authorized radio services.

The Commission News Release states that this proposal will "restore the technical flexibility originally envisioned for non-licensed devices."

The FCC proposal starts with the premise that there are two kinds of RF devices: intentional radiators and unintentional radiators. Intentional radiators are devices that intentionally generate RF, such as garage door openers, walkie-talkies, cordless phones, etc. Unintentional radiators are devices which generate RF, such as computers and receivers. In this NPRM, the FCC proposes various field strength limits depending on frequency. The ARRL lab is conducting tests to deter-

(Please turn to page 10)

Ham License Plates Not Affected by Generics

A program to assign "generic" license plates recently implemented by the Wisconsin Department of Transportation does not threaten Amateur Radio call sign license plates, nor does it mean the demise of any of the currently-issued special plates, such as "personalized" plates, collector plates, etc.

The plan was begun to stop the proliferation of special plates (more than 200 different ones, at present). The large num-

ber of special plates is confusing to law enforcement personnel, and it means that if you planned to ask DOT to issue plates for "beekeeper on the second Sunday of every other month," you can forget it.

Amateur Radio call sign license plates are due for renewal each January, and if you have such plates, you should receive your renewal notice from DOT soon. If you

(Please turn to page 9)

ON THE INSIDE

Yellow Thunder Amateur Radio Club--4
The Old Family Album-----5
Riverland Amateur Radio Club-----6
Kap's Kolumn-----7
Small Talk-----8
Repeater Profiles-----10
Eau Claire Amateur Radio Club-----11
New Products-----12
Wisconsin Nets Association-----13
The Wisconsin Packeteer-----14
Unusual Trivia Quiz-----16
- Lots of other neat stuff! -



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DISPLAY ADS OR INQUIRIES REGARDING DISPLAY ADS should be directed to Harry Westlund, address above.

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Swapfests and other Social Events

January 9, 1988. The 16th annual Midwinter Swapfest, sponsored by the West Allis Radio Amateur Club, will be held at the Waukesha Exposition Center Forum, Hwys F & FT, Waukesha, WI. Food and refreshments served by WARAC at low, low prices. Free coffee and donuts. Amateur exams administered by the Badger Examiners. (Admission Ticket NOT required to take exams.) Admission \$2.00 in advance or \$3.00 at the door. Reserved tables, \$3.00. Non-reserved tables, \$4.00. (first come - first served) Electrical outlets \$5.00. Contact: (with sase) WARAC Swapfest, P.O. Box 1072, Milwaukee, WI 53201. See last issue for further information and map.

The Wisconsin QSO Party will be held March 20, 1988. Watch Badger State Smoke Signals for further details.

Jefferson Hamfest, March 27, 1987.

Madison Area Repeater Association Swapfest, April 10, 1987.

The Tenth Annual Ozaukee Radio Club Swapfest will be held May 7, 1988.

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas.

Send information on your event to Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages, and/or we can include your flyers. For information on rates and requirements for our advertising pages, and/or for including flyers, please contact K9ZZ or K9EN.

Club Meetings

BADGER AMATEUR RADIO SOCIETY
(W9YT - UNIVERSITY OF WISCONSIN - MADISON)
Monthly while school in session - 2nd Wednesday - 7:30 p.m. - B-314, Electrical Engineering Building.

CENTRAL WISCONSIN RADIO AMATEURS, LTD.
(STEVENS POINT)
Second Wednesday.

EAU CLAIRE AMATEUR RADIO CLUB
2nd Tuesday - 7:30 p.m. - Parks and Recreation Bldg., Oxford and 1st Streets, Eau Claire. Hams, guests welcome. Travelers welcome on wide area club repeater K9UXP, 146.31/91.

FOUR LAKES AMATEUR RADIO CLUB (MADISON WI)
First and third Tuesdays - 7:30 p.m. - Red Cross Bldg., 4860 Sheboygan Ave.

FOX CITIES AMATEUR RADIO CLUB
Third Monday - 7:00 p.m. - Roosevelt Jr. High School, 318 E. Brewster St., Appleton. Info: (414) 735-6294. Winter Banquet, January 23, 1988. Contact KA9MPP.

GREEN BAY MIKE AND KEY CLUB
Second Thursday - Red Cross Bldg., corner Danz and Deckner, Green Bay.

GREEN FOX AMATEUR RADIO CLUB
Third Monday - 7:30 p.m. - Green Lake Town Hall, int. of county hwy. K and N.

KETTLE MORAINE RADIO AMATEURS
Second Friday.

MANITOWOC COUNTY RADIO AMATEURS
First Wednesday - 7:00 p.m. - City Hall, 817 Franklin St., Manitowoc.
Second Wednesday - Red Cross Building, 1816 Washington St., Manitowoc.

MENOMONEE FALLS AMATEUR RADIO CLUB
Last Tuesday - Doors open 7:30 p.m., meeting begins 8:00 p.m. - Security Savings and Loan, Menomonee Falls. Amateurs and guests welcome.

MILWAUKEE RADIO AMATEURS CLUB
Second Thursday - Wauwatosa Savings and Loan, 7500 W. State St.

OZAUKEE RADIO CLUB
Second Wednesday - 7:30 p.m. - Saukville Community Center.

RIVERLAND AMATEUR RADIO CLUB
First Tuesday - 7:30 p.m. - Onalaska Community Center, Onalaska WI.

ROCK RIVER RADIO CLUB
First Tuesday - 8:00 p.m. - Dodge County Sheriff's Dep't, 141 N. Main, Juneau WI.

SHEBOYGAN COUNTY AMATEUR RADIO CLUB
Second Tuesday - 7:00 p.m. - Sheboygan Red Cross/Boy Scout Bldg., 2032 Erie Ave.

SOUTH MILWAUKEE AMATEUR RADIO CLUB
First Wednesday - Legion Post 434, Shepard Ave., Oak Creek WI. Auctions in March and October.

TRI-COUNTY AMATEUR RADIO CLUB
Meetings are held at 7:00 p.m., the second Sunday of each month at the Trinity Lutheran Church, 314 Barrie, Fort Atkinson, WI.

WEST ALLIS RADIO AMATEURS CLUB
Second Tuesday - 8:00 p.m. - St. Francis Savings, 9330 W. Greenfield Ave.

WISCONSIN VALLEY RADIO ASSOCIATION (WAUSAU)
First Tuesday - 7:30 p.m. - Location varies; info on 146.04/64, Wausau.

YELLOW THUNDER AMATEUR RADIO CLUB (BARABOO)
Days rotate: 1988 meeting dates: Mon., Jan. 18, Tue., Feb. 16, Wed., Mar. 16, Thu., Apr. 14, Mon., May 16, Tue., Jun. 14, Wed., Jul. 13, Thu., Aug 11, Mon., Sep. 19, Tue., Oct. 11, Wed., Nov. 16, Thu., Dec. 15. Monday meetings in room 10 of the Baraboo Civic Center; all others in room 25. Meetings start 7:30 p.m.

Let Badger State Smoke Signals know your club's meeting dates, and we will let our readers know of your meetings and activities. There may be Amateurs in your area interested in joining your club, or members of other interested in making an interclub visit.

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GLARA 440 Repeater Up and Running.....

The Green Lake Amateur Repeater Association announces that it's 449.4 / 444.4 repeater is active, however, operating on restricted power in Ripon, Wisconsin during it's modification and installation phase. Full operation at the repeater site, 3 miles south of Big Green Lake, is anticipated at sometime in December with equipment including a Yaesu FTR-5410 repeater, S-Com 5K controller, TPL 50 watt amplifier, TX-RX duplexers, and a 4 bay phased dipole array at 130 feet fed with 9913 cable. GLARA would like to thank Gregg - WD9DHI for setting up the basic system and Pat - KD9UU for modification information.

This repeater is a result of a special fund raising effort conducted by GLARA members Mac McCurdy - N9CXX and Ken Slate - W9ITW which realized enough proceeds to purchase the entire set-up!

(continued on page 3, column 3)

The TEST POINT



The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area.

January 9, 1988	Milwaukee, WI (MRAC)
January 9, 1988	Waukesha, WI (BE)
January 16, 1988	Eau Claire, WI
January 16, 1988	Ft. Myers, FL
January 18, 1988	Madison, WI
February 20, 1988	Milwaukee, WI (BE)
February 27, 1988	Madison, WI
March 19, 1988	Menomonie, WI
March 19, 1988	Ft. Myers, FL
March 26, 1987	Wisconsin Rapids, WI
March 27, 1988	Jefferson, WI (BE)
April 9, 1988	Madison, WI
April 16, 1988	Milwaukee, WI (BE)
April 16, 1988	Eau Claire, WI
May 7, 1988	Cedarburg, WI (BE)
June 18, 1988	Menomonie, WI
July 8, 1988	Eau Claire, WI
July 9, 1988	Eau Claire, WI
October 15, 1988	Eau Claire, WI
November 12, 1988	Menomonie, WI
March 18, 1989	Menomonie, WI
June 17, 1989	Menomonie, WI
November 11, 1989	Menomonie, WI
Monthly, First Sat.	Racine, WI
Monthly, Third Sat.	Loves Park, IL

GENERAL RULES FOR MOST EXAMINATIONS:

Most examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walkins. Check with sponsor to find out if they allow walkins.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 22¢ SASE if you request one from the ARRL or BSSS. In most cases, forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for \$4.35 payable to "ARRL/VEC".

The FCC now requires applicants to show their original Amateur license to the VEC. A copy of your license must be attached to your FCC form 610.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

FOUR LAKES ARC (ARRL/VEC)

Madison, WI

January 17, 1988, February 27, 1988 and April 9, 1988

Fire Station #2, at 421 Grand Canyon Dr. They start at 8:30 a.m. sharp.

MILWAUKEE METRO AREA TEST TEAM - MRAC/VEC (MRAC)

January 9, 1988

Tests are given at 9:00 AM in room 256, Wauwatosa East High School at 74th and Milwaukee Ave. Use the east (74th St.) entrance.

Bring your original license and 3 good photocopies, a pen, and \$4.35 for the exam fee. Walkins accommodated if time permits.

Register in advance on a Postal Service 14

cent postcard; print the grade of license you are applying for, your name, address, and telephone number. Send to: The Milwaukee Radio Amateurs' Club, Inc., N50 W16328 Pin Oak Court, Menomonee Falls WI 53051.

BADGER EXAMINERS (BE) - MILWAUKEE

January 9	(at West Allis RAC Swapfest in Waukesha - 9:30 a.m.)
February 20	
March 27	(at Jefferson Swapfest - 10:30 a.m.)
April 16	
May 7	(at Ozaukee Club Swapfest in Cedarburg - 9:00 a.m.)

Unless otherwise noted, examinations are administered from 1 to 4 p.m. at St. Nicholas Parish, 5353 N. Green Bay Ave. (2 1/2 blocks south of Silver Spring), Milwaukee. Bring your original license, a good photocopy of it, and a second form of ID. Walkins are welcome. Technician license holders must bring proof of testing prior to March 21, 1987 to upgrade to General with code test only. Advance registration: send post card with your name, test or tests you wish to take, date you wish to be tested, your call sign, address and phone number to Badger Examiners, Mickey Dolgin, KB9G, 507 E. Spooner Rd., Fox Point WI 53217 (414) 351-5311.

WISCONSIN RAPIDS, WI - ARRL/VEC

March 26, 1987 - 9 a.m. at Mid-State Technical College, 500 32nd Street North, Wisconsin Rapids. Talkin on 145.29 repeater. Walkins accepted. More info from Gene Santoski, K9UTQ, 1220 18th St So., Wisconsin Rapids WI 54494 (715) 423-6368.

EAU CLAIRE, WI - W5YI/VEC

9:00 A.M. to Noon, except July 8, 1988, 6:00 P.M. to 9:00 P.M. Exams are given at the University of Wisconsin Facilities Management Building in Eau Claire, except that the July exams are given in conjunction with the Eau Claire Amateur Radio Hamfest. There is no pre-registration requirement. Contact: Carl Searing, W9NW, 1129 McKinley Road, Eau Claire, WI 54703. (715) 843-1303.

MENOMONIE, WI

Credit Union Office Building, Conference Room, lower leve, 444 S. Broadway, Menomonie, WI. Contact: Dr. Thomas W. King, KD9TI, c/o office, 444 S. Broadway, Suite 1, Menomonie, WI 54751. (715) 235-4747 (O), 235-5757 (H).

RACINE, WISCONSIN - ARRL/VEC

First Saturday of each month except during summer and the Christmas holidays.

Exams are given at the Red Cross Building, 4521 Taylor Ave., Racine, WI. Walkins are permitted.

Send pre-registration to: William R. Firchol, Jr., N9DMP, 1912 27th Street, Kenosha WI 53140.

Third Saturday of every month.

Northern Illinois Volunteer Examiners (DeVry VEC). Held at North Suburban Library on North Second Street in Loves(Park, IL. Contact: Gene Melton, AK9N, 2901 Billie Rd., Rockford, IL 61109, (815) 874-6867.

FORT MYERS, FLORIDA (ARRL/VEC)

January 16 and March 19, 1988

Combine a Florida vacation with an upgrade exam - the best of two worlds! Contact Bob Strathy, WV4F, 5428 Brandy Circle SW, Fort Myers FL 33919. (813) 481-4880.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules.

Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN or K9ZZ at the address shown on page 2.

FREE WANT ADS in BADGER STATE SMOKE SIGNALS

Yes, they are FREE. BSSS will run your WANT AD listing Amateur Radio related equipment you wish to buy, sell, trade, or whatever. Non-commercial listings only. Length and number of free ads may be subject to space limitations. We reserve the right to refuse any listing that we feel is inappropriate. Send to Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901.

WANT TO SWAP: A vintage radio for a Ham Radio transceiver station with digital readout. The radio is a Marshall receiver made in 1917 in Chicago by the Marshall Radio Company. Ed Malinowski, KA9VMG, Rte. 1, box 132, Century Rd., Loyal, WI 54446. (715) 255-9958 (PM).

FOR SALE: National Receiver, HRO 50T-1, in very excellent condition, complete with 7 coil sets, National speaker, xtal calibrator, & NBFM adaptor. This receiver has spent most of its life in a laboratory, under cover, and has never been subjected to tobacco smoke. I pack, you ship. \$200.00. Fred A. Linn, W9NZF, 5608 Edgewater Dr., Cedarburg, WI 53012.

FOR SALE: Spectrum communications SCR 1000, 25 watt repeater with Sinclair Q202G Duplexer, operational on 145.37 MHz. \$600.00. Unused jacketed Andrews hardline with new UHF connectors. Each length approximately 120 feet long. 1/2 inch - \$50.00. 7/8 inch - \$75.00. Richard Drew, K9PJB, (715)-423-1987

FOR SALE: Heathkit SB-101, 180 watt HF transceiver. Includes matching speaker, power supply, cw filter and desk microphone. \$125.00. Duane Brummel, K9SFI, (608) 835-7554

GLARA 440 Repeater (from page 2)

As with the 2 meter GLARA 'Green Lake' repeater (146.955/.355), this unit will be open to all users with the best wishes of the GLARA membership. GLARA is a dues-free organization that relies on contributions from members and fund raising activities to support it's activities. For more information about GLARA, contact Mac McCurdy - N9CXX.

New types of fishing lures are introduced each year, and the fishermen continue to bite.

Yellow Thunder Amateur Radio Club

**K9ODK
WB9FDZ**

The next meeting of the YTARC will be held at 7:30 p.m. January 18, 1988, in room 10 of the Baraboo Civic Center.

The December 10th meeting of the Yellow Thunder Amateur Radio Club was called to order by President, Steve Schwoegler, WB9RNL, at 7:52 p.m.

The following members were present:

Steve Schwoegler, WB9RNL	Wisconsin Dells
Art Kleefisch, W9WSS	Baraboo
Harry Westlund, K9EHJ	Baraboo
Jim Decker, WB9UQT	Baraboo
Duane Grotophorst, KA9HKL	Loganville
Jim Romelfanger, K9ZZ	Baraboo
Peter Sweeney, WD9JIB	Reedsburg
Harold Reif, KA9YQP	Baraboo

The Minutes of the last meeting were approved as printed in BSSS.

There were no financial transactions by the Treasurer so the financial report is the same as last reported.

The Secretary had no communications to report.

It was reported that Sandy Hemmer, KA9VFW, and Don Faith (call unknown), two local novices, have advanced to technician class.

The chair then called for more nominations for club offices and none were submitted. On a motion by Harold Reif, and seconded by Art Kleefisch, the call for nominations was closed and the following were elected to office.

President: Steve Schwoegler, WB9RNL
V. President: Duane Grotophorst, KA9HKL
Secretary: Harry Westlund, K9EHJ
Treasurer: James Decker, WB9UQT

The next order of business was the subject of novice classes. It was decided that there would be some changes in this years classes. The two major changes would be:

1. classes would begin January 19, 1988, late enough to avoid any clash with the holiday season.

2. Classes would be held twice a week instead of once a week. This would cut down the

calendar time of the school and should keep the subject matter fresher in the minds of the students. Classes will be on Tuesday and Thursday evenings at the Civic Center in Baraboo.

Members who will conduct these classes are:

Art Kleefisch, W9WSS
James Decker, WB9UQT
Duane Grotophorst, KA9HKL
Steve Schwoegler, WB9RNL

There was no further business so the buck nite drawing was held and the winner was Ken Johnson, K9DZG, who was not in attendance. Sooooo next months drawing will be for \$9.00 The President then adjourned the meeting at 9:22 p.m. where upon the members exchanged Xmas presents and then went to the "Country Kitchen" for refreshments.

Respectfully submitted,
Harry Westlund, K9EHJ, Secretary

Birthdaze

Evelyn Fox WB9QZA January 19

Sentence Sermon

It is better to have made good resolutions and broken them, than not to have made them at all, for in the making of the resolution there is some divine urge in the soul, there is some far-off light that shines.

--Harry Emerson Fosdick

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UNIVERSAL TRAFFIC QUERIES (from page 13)

the procedure that W9XXX used above (only not necessarily from 9RN unless you are a rep from that net).

Just as a matter of information, there is a recommended variation in having stations answer the net call-up. Either they can answer one at a time and be acknowledged in turn by NCS, or they answer consecutively, being careful not to interfere with each other. In some nets, the reporting-in is done in alphabetical order of the "regulars" or in alphabet groups, to minimize doubling. We do not use these methods in any of the Wisconsin nets.

Checking into phone nets is a bit different and I will cover that in the next issue. Right now I want to explain to you how traffic is passed on a CW net.

As soon as a station checks into a net who can receive a piece of listed traffic, NCS will immediately instruct both the station with traffic and the station receiving it to move to another frequency to pass the traffic. For example, lets say that K9UTQ can handle the Wausau traffic as listed by W9XXX. As soon as K9UTQ checks in, NCS will call W9XXX and K9UTQ as follows:

NCS: "UTQ"
K9UTQ SENDS: "DIT"
NCS: "XXX"
W9XXX SENDS: "DIT"
NCS: U8 ES PASS UR WAUSAU
W9XXX: G
K9UTQ: G

The stations called by NCS always acknowledge by sending a "dit" to let him know he has their attention. U8 means go up 8 kHz and pass your Wausau traffic. W9XXX and K9UTQ respond by each sending "G" which means "going"

When two stations are dispatched to a side frequency to clear traffic, the station to receive the traffic calls first. The number of KHz up or down as given by NCS is only approximate; the receiving station does not call on top of an ongoing QSO, even a casual ragchew. He calls as close to the designated frequency as possible without causing undue QRM to others. The station designated to transmit should look around until he finds the receiving station, then zero-beats his signal, whether it is exactly on the designated frequency or not.

Remember, ALWAYS respond to NCS by simply sending a "dit" or "dah" or "R"

During the course of the net, after it appears that all stations have reported in, NCS may start excusing or releasing (QNX) stations for whom there is no traffic and who have no traffic to send. The usual procedure is to call each such station and say QNX, at which time the excused station will identify and leave the net. After all traffic has been cleared and the net has no further business, NCS will close the net. He does so as follows:

WSSN WSSN DE K9NCS QNF QNX 73 ES GE DE K9NCS

SK

Which means, the net is free (QNF) and all stations are excused from the net (QNX).

Stations still on net frequency can respond by sending:

GE (good evening) or GN (good nite) and NCS will repeat.

There are a great many variations in CW net procedure from the above, but this gives you an idea of the basic procedure used. After you have QNI'd a few times, you will begin to get the hang of it and most likely will find it an exhilarating example of teamwork.

Next month - Phone net procedures. 73 for now es CU on the nets.

K9UTQ - STM/WIS

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Be sure to tune in the Madison 76 repeater WB9AER, every Wednesday night at 9:00 p.m. via WB9RSQ for WESTLINK AMATEUR RADIO NEWS AND BULLETINS, followed by the MARA club net. We encourage you to listen and check in for WESTLINK and MARA club news and info.

DESKS

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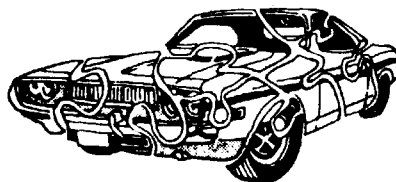
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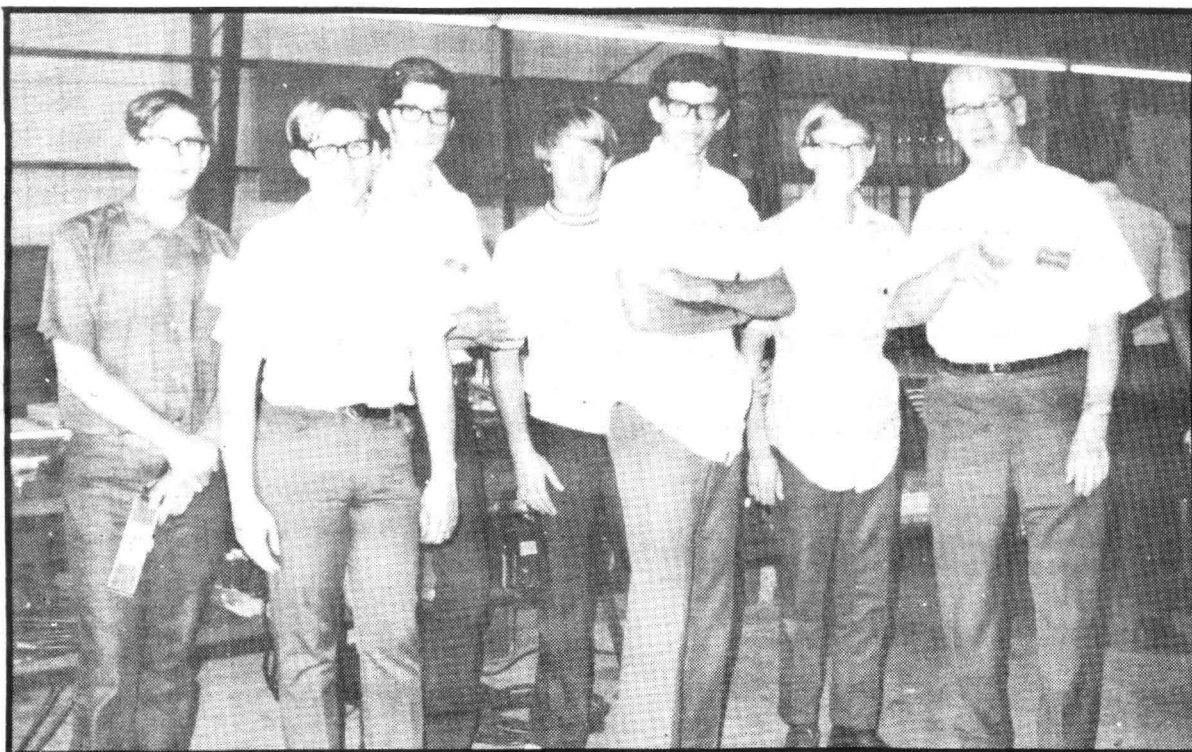
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The Old Family Album



We went thru our old photo file, and came up with more semi-historic pictures, taken along the way by several photographers.

The top photo was taken by Ervin Busse, W9OMO, and shows the Radio Amateurs attending the ManCoRad (Manitowoc County Radio Amateurs) spring dinner on May 14, 1977. Since it's small, we're not sure how well the hand-written caption at the bottom will reproduce, so here are the subjects in the picture, all left to right: Front row: W9OMO, W9ZGQ, WA9SNU, W9GI, W9MDG, WB9JMQ, K9RFZ, WB9MNQ, WB9OBX, WA9CCB. Second row: WB9MCJ, WB9DQD, K9ZZ, K9FHI, W9NGT, W9EWC, K9EN, WB9ESM, WD9AUP, WA9SWX, Bob (last name not readable), K9LWI, W9SNK, K9DIN. Back row: WB9SZF, W00BB, WB9JJP, WB9BDZ, WB9FYK, W9BZU, WB9LAM, K9HAG, WA9AUC, WB9MVZ. Of these, the following are known to be Silent Keys: Herb Stecker, W9ZGQ; Al Belanger, W9MDG; Fran Murray, K9RFZ; and Herman "Butch" Greve, W9EWC.



The photo at left was taken circa 1971 by K9PKQ (now K9ZZ) at the Starved Rock Radio Club Hamfest in Ottawa, Illinois. Pictured are (left to right) Al Johnson, WB9FMU; Eric Bjornsen, WB9HBP; Dave Gilbert, ex-WB9FKW (Silent Key); Mark Beck, WB9FFQ; Tom Luck, WB9BPS; Bob Becker, WB9EPT; and Phil Haller, W9HPG. Phil was Central Division Director when this photo was taken; he is now a Silent Key.

The bottom photo was taken on December 6, 1969, in Oshkosh, WI, by Dick Lemme, WA9GJU (now KB9FA). Pictured are delegates to a meeting of the Wisconsin Nets Association. They are, left to right: Jack True, WA9QNI; Roy Pedersen, K9FHI (then Section Communications Manager); Ken Ebnetter, K9GSC (now K9EN); Lyall Buestrin, W9DXV (Silent Key); Sid Pokorny, W9NRP (later W5UAU, now a Silent Key); Jim Merrill, W9AYK; and Sherm Carr, W9NGT.



The December meeting of the Riverland Amateur Radio Club was called to order at 7:30 p.m. by Secretary Dick (KØJYB) due to the absence of the President and Vice President. The minutes of the last meeting were accepted as published in the BSSS.

37/97 REPORT

A voluntary contribution of \$100 each was made by Van (WA9FIO) and also by Dick (KØJYB) as a nest egg for a new repeater fund. It is hoped that other members will feel free to add to the fund. Van will present a plan for a new machine and a budget proposal. This material will be presented at the January, 1988 meeting.

JACKET REPORT

The jackets and T shirts are in! They will be distributed at the end of the meet-

ing. Thank you Craig (N9ETD) for a job well done.

CHRISTMAS PARTY

Party chairman Bill Wood (WB9VYI) was absent, but the party will be held at Nob Hill Supper Club on Sat. evening, January 16, 1988. Hope to see you all there!

OLD BUSINESS

The County Board has not had a meeting as yet and there is no news regarding the tower problem.

Craig (N9ETD) announced that RARC placed #31 out of 274 entries in class 3A on Field Day.

NEW BUSINESS

Secretary Dick (KØJYB) announced that he has new form 610s for anyone needing them.

He also announced that ballots for the Ham of the Year will be handed out and a plaque will be presented to the winner at the annual Christmas party.

A motion was made by Walt (WD9GCR) and seconded by Karl (W4ST) that we raise the RARC annual dues to \$15. A motion was made by Jim (K9LBX) that we pro rate the dues to new members only, at a rate of \$1.25 per month. The motion was voted upon and passed unanimously.

The meeting was adjourned at 8:30 p.m.

PROGRAM

A slide and sound presentation was given by Glen (NØBBW). The subject was on the space photos of planets taken by the Voyager. Glen also showed a video tape of the Moon and Jupiter taken by himself with the aid of a telescope and a video camera. Thanks Glen, it was an interesting show.

MEMBERS AND GUESTS

Walt Altus	WD9GCR
Karl L. Olberg	W4ST
Bob Pluntz	WD9FKV
Craig Goldbeck	N9ETD
Mike Tessmer	NØBSH
Bill Winder	K9EGQ
Herman Ludvik	W9HJV
Wid Johnson	W9DM
Maty Johnson	W9DM (XYL)
Phil Uehling	W9UP
Duane Fruechte	W9HWQ
Ken Weigel	N9CDT
Val Elston	WA9FIO
Ron Reed	KD9OY
Jack Yoshizumi	W9KTD
Vern Sanders	K9FHZ (Guest)
Jim Burcum	K9LBX
Ray Wakeen	WA9HHM
Tim Stoffel	NS9E
Dick Low	KØJYB

Meet W9FZC

Here's John La Blonde, W9FZC, of Elkhorn, Wisconsin, who is serving his second term as Chairman of Wisconsin Chapter 55 of the Quarter Century Wireless Association.

W 9 the Fast Zipper Closer has been licensed with the same call sign for 58 years. He started in Amateur Radio in Antigo, Wisconsin. John is a member of Air Force MARS and the Badger Emergency Net. And, as John says, the zipper is on his tobacco pouch.

- Thanks W9FZC



1988 QSO Party

The 1988 Wisconsin QSO Party, sponsored by the West Allis Radio Amateur Club, will be held from 1800Z March 20 thru 0100Z March 21, 1988. Rules and an entry form will be sent to all 1987 participants during January; if you would like them sooner, send an SASE to Wisconsin QSO Party, West Allis Radio Amateur Club, P.O. Box 1072, Milwaukee WI 53201. The rules and entry form will also be published in an upcoming issue of Badger State Smoke Signals. (Thanks WA9POV)

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PREVENT ACCIDENTAL KEYUPS WHEN USING YAESU MH-15ab MICROPHONE

When using the Yaesu MH-15ab microphone, the tone pad on the microphone can be bumped very easily when handling the mike, causing accidental transmitter keyups. This can be corrected by application of one or more of the modifications below:

1. Open the microphone and remove the PC board, being careful to not damage the mic element or the LED.

2. Locate the junction of R10 (47K), C7 (4.7 MFD), and D2 (cathode end). This junction is near the top edge of the board. On the foil side of the board, tack solder one end of a 2 inch piece of very thin stranded hookup wire to the junction.

a. To permanently disable the keypad from keying the transmitter, connect the free end of this wire to the center terminal of the Lock switch. The TT pad will still generate tones when the PTT is held down, but will not key the transmitter.

b. To use the Lock switch to enable and disable the TT pad's ability to key the transmitter, connect the free end of this wire to the unused terminal on the Lock switch.

3. If option (b) is selected, you may also want to solder a jumper between the other two terminals of the Lock switch. This will keep the two channel/frequency selector buttons on the top of the microphone active regardless of the setting of the Lock switch, using the Lock switch only to lock out the TT pad from keying the transmitter.

4. Carefully reassemble the microphone.

- Rich, N6LRT,
via K9GDF, Technical Coordinator

ARRL FOUNDATION SCHOLARSHIPS

Are you a licensed amateur planning to attend college next fall? The ARRL Foundation is administering six scholarships for the 1988-89 academic year. They are the Barry Goldwater Scholarship, \$5000; the Paul and Helen Grauer Scholarship, \$500; The L. Phil and Alice Wicker Scholarship, \$500; the Perry F. Hadlock Memorial Scholarship, \$500; the You've Got A Friend in Pennsylvania Scholarship, \$500; and the Edmond A. Metzger Scholarship, \$500. Send for information and applications to the ARRL Foundation, c/o ARRL Headquarters, 225 Main Street, Newington CT 06111.

(From The ARRL Letter)

Subscribe to Badger State Smoke Signals

Kap's Kolumn

With all of the attacks lately by the private sector on the frequencies allocated to Amateur Radio, it is a little frightening to see the attacks continuing from a branch of the FCC. As of this writing, no one seems to know why the FCC is seeking to take these frequencies from us.

While on one of my business trips thru the Midwest lately, I was in QSO with a ham who like myself travels in his business life, and calls on the universities and colleges in this country. While discussing the threat to our frequencies he offered some comments that are worth repeating here for all of us to contemplate.

In the early days of Amateur Radio, all of the major schools of higher learning had an Amateur Radio Station on the campus that was backed by the school administration and provided a place for the students to gather to talk about radio and operate the club station, and in most places an area to be used in the design and building of equipment for the station and as projects for the students.

Competition was great between schools, and the call letters of the famous school clubs of that period did a lot to increase the competitive nature of radio contests. Oh, to work the station at MIT, or at IIT, Yale University, and many others was a thrill, since the discussion would center on the latest developments in the world of communications. The so-called leading edge of

technology. Students in their spare time would use the club station as a sort of hang out to try new ideas and to just sit around to talk about new receivers, transmitters and a special idea one of the group would have on a new super antenna system.

Visits were arranged between schools so that the information exchange and new ideas could be accomplished. Well, that was the way it was, once.

The picture today is not so bright. The use of repeaters in the local school areas has allowed the student to enjoy Amateur Radio from his room, his classroom, or his car. He can chit chat with other licensees on the campus without ever leaving his present environment. The interaction that was the fun of the past does not exist today. The club station has become a thing of the past. Those old time famous club calls are no longer heard during the contests, and in many cases the station license has expired with no one responsible for renewing the license. The FCC no longer issues club calls and so the incentive to establish a new club at schools around the country with a unique call is lost.

The loss of interaction between students at these club stations reduces the interaction needed to create new ideas that result in improvements in our hobby. The attacks on our frequencies only help to reduce the interest of the stu-

(Please turn to page 11)

ANSWERS - DECEMBER TRIVIA QUIZ

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2. Approximately 325 degrees
3. Height above average terrain
4. PL259
5. Ten-Tec
6. 147.030
7. 1240-1300
8. CQ Magazine
9. JY1
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SMall Talk

By Richard R. Regent, K9GDF
Section Manager
5003 South 26th Street
Milwaukee, WI 53221

Q. Got any clever money saving ideas for removing an antenna tower base?

A. A recent idea by Travis, W9VQD, had to save money goes like this: To remove the bottom section of an abandoned tower from the concrete base for a friend, Travis says, "Why rent a special saw for \$15? Instead use an electric hand drill with an abrasive cutting wheel." Only problem Travis had, he wore out two wheels and damaged the drill motor bearings. Total project cost, the clever way, \$35!

Q. Where can I get handouts or literature in a hurry to put to good use for students who might be interested in amateur radio? - Father Joe, W9NIT, Saint Mary's Catholic Parish, Richland Center, WI.

A. I have some appropriate material on hand and will send it to you immediately. For a larger supply, it is better to plan ahead and then contact ARRL Headquarters, which has a stock of all the latest pamphlets. Write to:

Lee G. Hayford, AH2W
Club Program Department
American Radio Relay League
225 Main Street
Newington, CT 06111

Tell Lee the size and type of group you have in mind. Highlight Amateur Radio benefits while you hand out the pamphlets. Use discretion and a few handouts will go a long way. Be prepared to answer your group's questions.

Q. What is the name and call of the Amateur Auxiliary to the FCC Field Operations in the Madison area?

A. We have several qualified Official Observers in Wisconsin who are also qualified Amateur Auxiliaries. Unfortunately, there aren't any yet in the Madison area. You could refer your particular request through our Official Observer Coordinator, NC9G, who might be able to help from his location. (Now I'm wondering what your question really is.)

Q. Has anyone heard from Florence Belanger, W9WYJ?

A. Yes. Florence is living in Los Osos, California, and is known by the nickname "Duck Lady". Each day she strolls the area near her home and feeds bread to 58 quacking, fluttering, colorful feathered wild ducks. She is also greeted along her path by 8 meowing furry stray cats, who enjoy a variety of food handouts of her

days' leftovers. Duck Lady has cut back her own expenses to budget for the ducks and cats, but enjoys her special walks and animal filled life.

Q. Our Club station at UWM hasn't been getting QST for several months. The Administration sent the renewal money but we have run into some complications. What can you do to right things? - Jeff, N19E, Greendale, WI.

A. The College Administration was having difficulty proving renewal payment. Rather than wait any longer, I've written to ARRL Headquarters; you'll get a letter from them which will eliminate the complications and resume your QST delivery within two weeks. Thanks for letting me know about this tricky situation.

Q. Rich, have you received any response on your writing of the Emergency Communications Chapter in the new ARRL Operating Manual?

A. Loads of folks have written or mentioned their approval of the Chapter. For example, Illinois Section Emergency Coordinator, Robert, W9QBH, writes to compliment: "Much to my surprise and satisfaction, the Chapter on Emergency Communications has been improved. Your writing provides a boost to ARRL and the structure, but in a balanced manner. That's the way it should be. Just wanted to pass along my appreciation for your contributions to the rewrite." Thanks Bob and to all of you readers for your support.

Q. Are Cudahy hams having a tower-height restriction problem?

A. Not any more. But a month ago the Cudahy Building Inspectors were directing to limit ham towers to 35 feet. A few Cudahy amateurs contacted me, and within hours our ARRL State Government Liaison, AG9V, was on the phone giving legal counsel to the nervous hams. League Headquarters' Regulatory Information Branch sent several documents and a list of Cudahy amateurs to assist in providing support to abate the potential tower height restriction. The ham radio outlook looks bright once again for Cudahy amateurs.

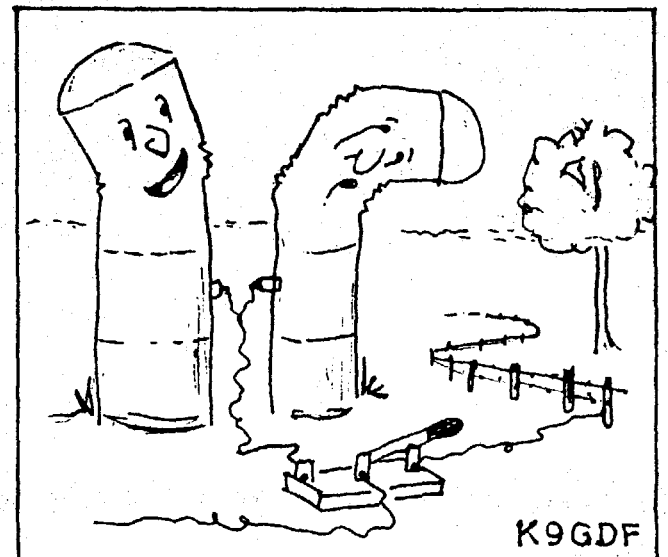
Q. What happened to Jean Pierre Coenen, the Belgian ham who visited Milwaukee?

A. Jean, now both NM9L and ON4KCH, was in Milwaukee during his 3-week vacation for deer hunting season, staying with his congenial stateside host, W9VQD. "All I shot was a squirrel, mistakingly thought it had antlers," says Jean. Travis, in a yellow shirt and striped bow tie, was busy amidst a dozen hams and friends videocam recording dinner festivities at his home for a going away party for Jean. OK4KCH is a computer analyst in Germany but keeps his station in Belgium, and during his U.S. visit renewed ARRL membership for 3 years and bought an IC-735. The new transceiver will be on the air around 14.050 MHz CW at

6:00 to 7:00 a.m. for ON4KCH or DLØESA (the Europa Satellite Association Club) QSOs.

Q. Do Wisconsin hams ever experiment with unusual antennas?

A. Sure enough. Greg, KA9VII, of Medford, says, "I loaded up my two Harvester silos, each one 24 feet in diameter, 90 feet high and 15 feet apart during the summer of '86, not with oats or corn but with RF. Peaked the antenna tuner and topped off a booming signal on 3985." Questions came rolling in, "...er, what kinda antenna you usin' ol' man?" Greg was always anxious to reply with the outlandish details of his big-signal dual-silo antenna.



We silos can relax. This is barbed-wire fence day on the antenna farm.

Q. Since I've been an Official Relay Station for some time, I'm wondering why I haven't gotten the Field Forum newsletter. Can you check into that, please? - Ed, W9NGP, Oconomowoc, WI.

A. A possible oversight at Headquarters. I've straightened matters out, you'll be getting the next issue of Field Forum for certain, and a couple of back issues are being sent to you as well. Thanks for your patience, Ed.

Q. Do you know of anyone in Milwaukee who can provide a HF phone patch to my folks for me? - Jackie, KC4AKG.

A. Best bet for you, Jackie, is to listen on 14.290 MHz SSB, between 6:00 and 8:00 a.m. any morning, for the Milwaukee-Florida Net. Then ask those friendly folks what they can do to put you in touch with your folks. If you have a routine message, try ham radiograms, we have a superb traffic team here in Wisconsin.

Q. Heard of any interesting club programs about telephones?

A. Julian Macassey, N6ARE, phoned from California to alert me that he would be

(Continued on page 9)

Small Talk

414-457-0874.

(Continued from page 8)

visiting Sheboygan and could give a talk to ham radio clubs on his area of expertise - telephones. I passed this news on to clubs and hope they made Julian feel welcome. You could write to him at 5317 Evergreen Dr., Sheboygan WI 53081, or phone

Q. Will you have a League booth at the next swapfest?

A. Yes. You'll be pleased to know that I set up and operate the League booth at all Wisconsin swapfests this year except for one at Rhineland-er (there were two that day). Wife Barb, N9DIJ, helps considerably at most of them. How's that for dedication?

HAM RADIO LICENSE PLATES NOT AFFECTED BY "GENERIC" PLATES

(from front page)

have call sign plates and do not receive a notice, pick up a form at a law enforcement office or request one from the Department of Transportation, 4802 Sheboygan Ave., Madison, WI 53702. The fee for Amateur Radio call sign license plate renewal is the same as for regular plates: \$25.00 per year. There is an extra fee for these plates, but that fee (\$10.00) is charged only in the year that new plates are issued; it is not charged when renewal stickers only are issued. This is not the same as personalized plates; owners of those vehicles pay the extra fee every year.

Something that perhaps all Wisconsin Amateurs/car owners may not know: More than one vehicle, registered

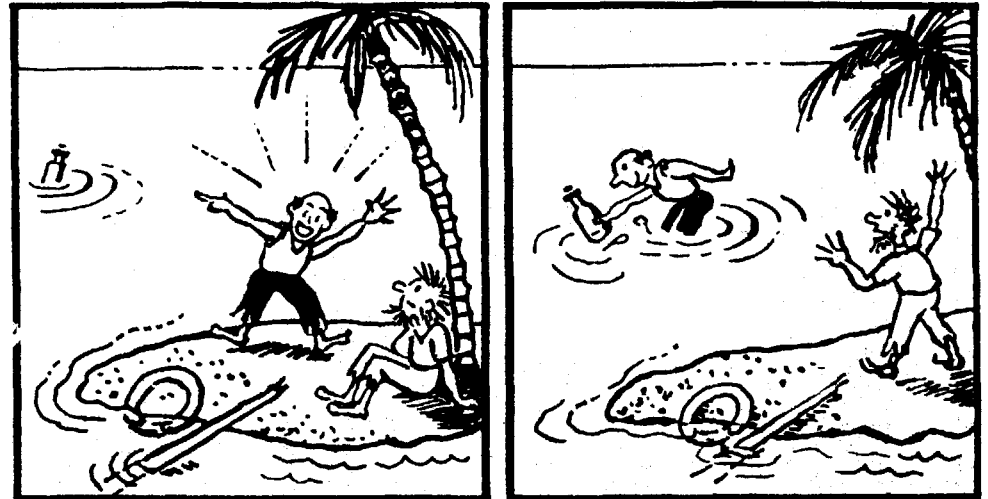
to the same owner, may bear the same Amateur Radio plate.

Last year was a new-plate-issue year, and of 2300 vehicles in Wisconsin which were bearing Amateur Radio plates, only 70% were renewed.

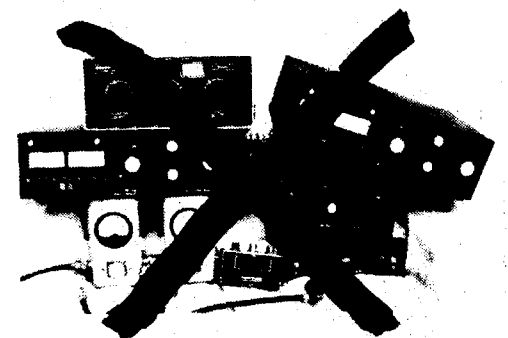
As we told you in our last issue, a proposal to permit use of Amateur Radio license plates on certain lighter trucks and motor homes has had favorable committee reports, and is awaiting legislative action, perhaps in January 1988.

Please send articles and photos to Badger State Smoke Signals. We depend on our readers to keep this newspaper informative and entertaining. The editor's address is on page 2.

ARL Sixty Seven



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Repeater Profiles

Story and photos
by John W. Frank, WB9TQG
P.O. Box 5113
Madison WI 53705

#1 IN A SERIES

S.E.W.F.A.R.S. Inc.

Although the Southeastern Wisconsin F.M. Amateur Repeater Society, Inc. (S.E.W.F.A.R.S.) wasn't formed until 1970, the history of the two meter repeater, located near Delafield, Wisconsin, dates back to 1963. It was originally a combination base station/repeater for Carl Rhode, W9ROM back in 1963, with 146.34 MHz in and 146.94 MHz out. As two meter FM activity increased during the 1960s, the frequency was changed to 146.34/146.76 in 1968. S.E.W.F.A.R.S. Inc. was formed in 1970, and the frequency was changed to 146.04/146.82. Today, it is an open repeater with an input frequency of 146.22 MHz and an output frequency of 146.82 MHz.

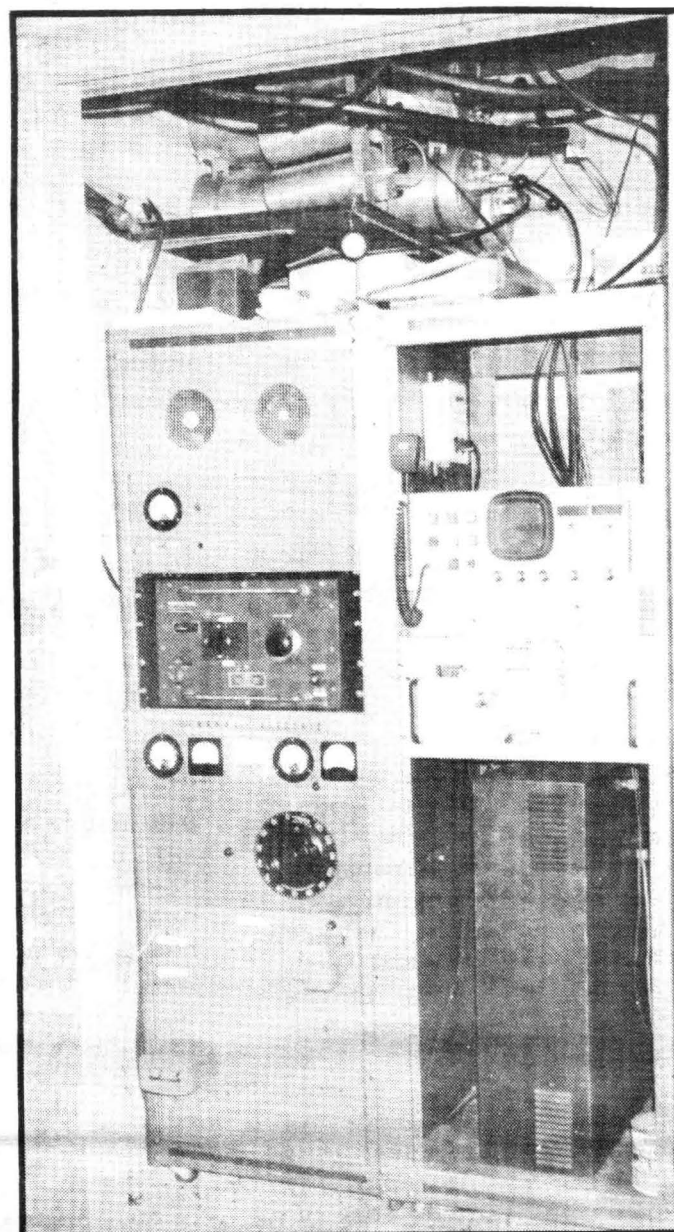
The basic repeater (see photo at right) is an SCR1000 manufactured by Spectrum Communications. The remote control system was homebrewed by var-

ious club members. The power amplifier is a modified military unit, and uses a pair of 4CX250 tubes. A Phelps-Dodge Stationmaster antenna mounted 280 feet up the tower (see cover photo) provides outstanding coverage over much of southeastern Wisconsin. Emergency power is available at the repeater site and the repeater is able to operate at full power for sustained periods of time without commercial power. S.E.W.-F.A.R.S. Inc. has an autopatch (for members only) on the repeater.

The Southeastern Wisconsin FM Amateur Repeater Society Inc. is a non-stock, non-profit corporation and is in good standing with the Wisconsin Secretary of State.

For information about membership in S.E.W.F.A.R.S., contact Richard Hageman, KD9BK, N52 W34384 Gletzen Drive, Okauchee, WI 53069.

Editor's Note: John Frank, WB9TQG, the author of "Repeater Profiles", also writes the "John's Junk Box" series carried in this paper. Beginning this month, the two series will alternate. John would appreciate hearing from **Badger State Smoke Signals** readers. Please send your comments to John at his address above.



FCC PROPOSES PART 15 CHANGES

(From front page)

mine how these proposed standards would compare to the present ones.

The FCC has also proposed what it calls "Consumer Bands." These bands would have higher proposed radiation limits and could have a transmission range of up to 1000 feet. At least two of these Consumer Bands are amateur bands: 902-928 and 2400 MHz. Of course, these bands are already shared bands, and the Amateur Ser-

vice is using them on a secondary basis; however, these proposed radiation limits could interfere with amateur weak-signal work on them.

The ARRL Technical Department is conducting a thorough examination of the proposal which will aid us in filing our comments with the FCC. The due date for comments to be received by the FCC was December 4, with reply comments due January 4, 1988.

(From The ARRL Letter)

SPECIAL DIGITAL WRISTWATCH DEVELOPED

The 48-hour day is at hand! For those active hams who can't seem to find enough time in the day to operate those DX bands, GEARVAK Scientific Laboratories has developed a special digital wristwatch that runs at half speed. As soon as all tests have been completed, the watch will be manufactured and sold to hams by Gorbinsky Marketing, Inc.

- WB7TGQ in GEARVAKf Bulletin

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Eau Claire Amateur Radio Club

NEXT MEETING

The next meeting of the Eau Claire Amateur Radio Club will be on Tuesday, January 12 at the Parks and Rec. Building.

MINUTES — DECEMBER 8, 1987 MEETING

The meeting was called to order at 7:36 p.m. by President Phil Spratt, KA9LJK. The minutes of the last meeting were read and approved. The Treasurer's report was unavailable. Because of the absences of both the Secretary and Treasurer, W9NW acted in both capacities for this meeting.

OLD BUSINESS

Bob, W9BAR, commented on the tower situation. We will have new coax on the WEAU tower, and our 31/91 repeater will once again be on the antenna at the 900 foot level, once the tower crew shows up to do the work. They still have work to do on the 2000' Fairchild tower, after which they will be working in Eau Claire. Many thanks to the Cable TV company for donating the replacement coax, coordinated by KB9R, and to W0AIH for the connectors. Don Alm, K9UXP, commented that the 'phone patch on the 84/24 repeater is now back in operation, thanks largely to Bill Lowe, WB9ULA, who almost single-handedly has maintained both repeaters, spending

many hours in the process. KC9NN, Fred, commented on the recent kerchunking of the 31/91 repeater, which seems to be of a regular mechanical repetition rate. W9BAR will check out the equipment, but the supposition is that this is probably an incoming signal.

W9NW reported on the Indianhead Track Club races held Saturday, Dec. 5th. An eight mile race, called the Frigid 8, was run concurrently with a three-miler, called the Thermal 3. The following hams provided communications during these events: KC9A, KA9OYY, KA9HUL, KA9HWN, W9NFJ, N9FLN, KC9NN & XYL Noline, W9BAR, KD9YO, K9UXP, and W9NW. All went well, and the track club was pleased to have us, especially since a record turnout of some 470 runners participated.

The annual Club Christmas Party was held on Saturday, December 5th, in the evening at the American Legion Hall in Eau Claire. Some 40 members and family attended, and a good time was had by all.

NEW BUSINESS

Election of Officers for 1988 was held. The nominating committee of KA9HWN, KE9BM, and W9NW came up with the following slate of candidates for consideration: President — Jerry Marx, NG9A; Vice-President — Mike McAlister, WD9DLM, and for Treasurer, Darold Patrow, N9FLK. No

candidate for Secretary had been found. President Phil Spratt appealed for a volunteer, and W9BAR, Bob Fallis agreed to run. Since there was only one candidate for each position, a unanimous voice vote put the four candidates listed above into office.

N9GJU and KA9HWN agreed to serve on the Finance committee with Treasurer N9FLK.

Ruth, NK9L, who is manager of the West Central Wisconsin Traffic Net (WCWTN), commented at some length on problems with the net. There is always a scarcity of net controls, and the net manager constantly has to fill in as NC. A problem has arisen concerning liaison with the Wisconsin Nets Association, so that we get no incoming traffic from other nets. Outgoing traffic is definitely slim in volume. There was much discussion concerning the future of the net. NK9L is to poll the normal constituency of the net, and her net controls, and the matter is to be brought up at the January meeting. There appears to be considerable sentiment to discontinue the net, or to run it only as a social net.

Lunch Committee for the January meeting: W9NFJ, K9UXP, WB9ULD.

Meeting adjourned.

Respectfully submitted:

W9NW, Acting Secretary

KAP'S KOLUMN

(Continued from page 7)

dent in Amateur Radio. After all, why become interested in a school activity that may not be of any help in the student's future life.

All of us must do everything in our power to stop this raid on our foundation. The usual call to all of us to write to our representatives is even more meaningful in this case. Frequencies lost to another service, even a small loss, is a loss forever.

220, 440, 7, and perhaps a part of 14 MHz may well be history we will talk about some day.

— Jordan Kaplan, W9QKE in
York Radio Club Circuit Board

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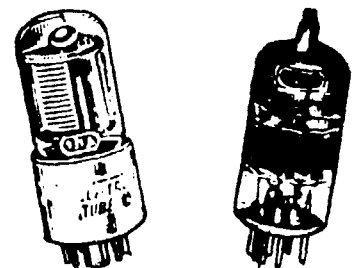
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RESONANCE RESEARCH OPEN HOUSE WELL ATTENDED

A sizeable crowd, including many Radio Amateurs from around Wisconsin and area, attended the open house given in late October by D.C. Cox of Resonance Research Corporation near Baraboo.

On display were large Tesla coils, a Van de Graff generator, and other spectacular devices produced by RRC.

One of the items shown was "The Eye of the Storm," a plasma display device designed by Cox. A version of this device is being sold by Radio Shack; also by RRC (Rte. 1, Baraboo WI 53913.)

D.C. plans to have an Open House next year, again in late October. Look for more information in Badger State Smoke Signals. D.C. thanks those Amateurs who attended; he hopes to see you all — and more of you — next year.



SHELL PRINTING

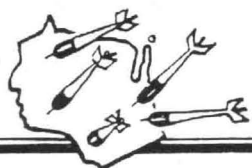
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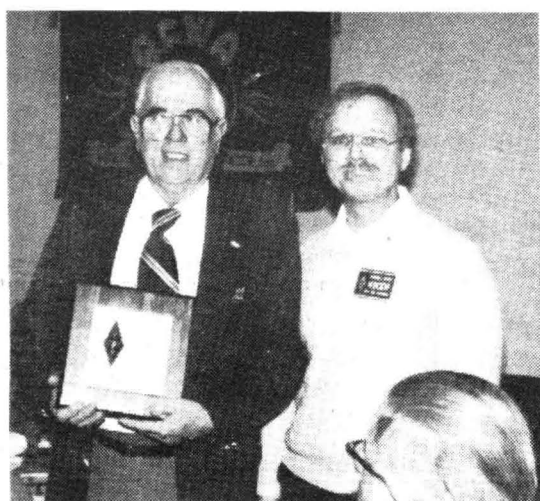
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HERE and THERE



At the Quarter Century Wireless Association Wisconsin Chapter 55 Fall Dinner, held in October, Wisconsin Section Manager Richard R. Regent, K9GDF (at right in both photos), presented ARRL 50 year membership plaques to John Scarvaci, W9GIL (at left, top photo) and Bill Littlewood, W9HE, at left in the bottom photo. Thanks to Les Peterson, W9YCV, for the photos.

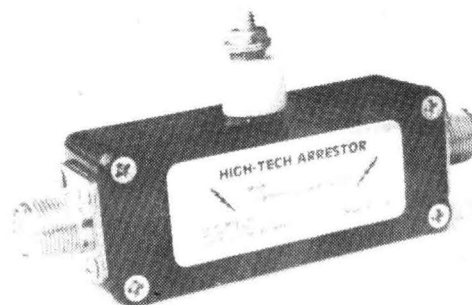
CONGRATULATIONS!

We hope our readers saw the photo and story about Baraboo's very own Bob King, KA9GNY, in December QST. It's in the "Up Front" section, and shows Bob making clicks with American Morse Code at the Mid-Continent Railroad Museum in North Freedom. The photo was taken by Bill Dunbar, AD9E, President of the Morse Telegraph Club. Bob was also featured in a wood carving magazine. Famous, this guy!

WPDR 1350 **WDDC FM100**

PORTAGE, WI

New Products



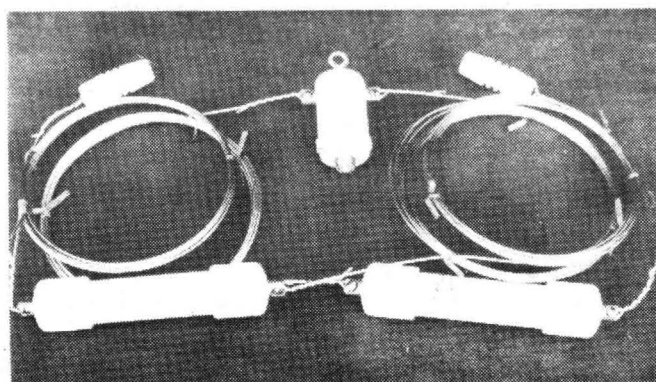
LIGHTNING/SURGE ARRESTORS

Spi-Ro Manufacturing offers a complete line of lightning/surge arrestors that install in the antenna line.

The "High-Tech Arrestors" protect transmitters, transceivers, receivers, base stations, etc. from damage caused by lightning surges, transients, etc.

The units utilize a gas filled discharge element, and a secondary stage to provide "double protection" to the equipment. The units restore themselves time and time again for repeated use.

The "High-Tech Arrestors" divert unwanted surges (such as lightning) away from the equipment to a safe ground. The arrestors are rated up to 2000 watts for transmitters, and prices start at \$29.95.



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A catalog is available showing models. Contact Spi-Ro Manufacturing, Inc., P.O. Box 1538-S, Hendersonville, NC 28793.

(Information supplied by Spi-Ro)



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WIN-E	YES	3662	0100Z	1900	WB9ICH
WIN-L	YES	3662	0400Z	2200	KC9CJ
NWTN	YES	34/94	0030Z	1830	W9ZZM
WCWTN	YES	31/91	0030Z	1830	NK9L
GR.BAY	NO	72/12	0245Z	2045	WB9NRK
			THU	WED	

RACES NO 3993.5 1815Z 1215 WC9AAG
USB TUE. & THUR.
RACES NO 3993.5 1400Z 0800 WA9QAY
LSB SUN.

Section Manager's notes



Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee WI 53221

West Allis RAC Member of the Year is hard working Ron, N9AU, and the club's new officers are: Pres. W9YCV; V. Pres. NF9P; Sec. N9AU; and Treas. WA9POV.

New officers Green Fox ARC: Pres. KB9WC; V. Pres. N9GVY; Treas. N9ALZ; Sec. WB9RBC.

QCWA Chapter 162 in southeast Wisconsin now has 13 members, with new officers: Pres. K9ZL; V. Pres. W9BIH; and Sec./Treas. W0WLN.

The Constitution's Bicentennial special event week is May 14 through 20 in Wisconsin with the following clubs using special 200 call signs: Four Lakes ARC, W9JZ; Madison DX Club, N89C; Central Wisconsin RA, WB9QFW; Greater Milwaukee DXA, NK9G; W/K ARC of Greater Milwaukee, AJ9U; Green County ARA, K9WMV; Shawano Schools RC, WA9BZW.

Stan, WB9RQR, of the Ozaukee RC, has prepared a snappy practical standard operating procedure for his club's emergency communications activities. Watch for word on the ORC Post Everything Party.

George, W9MDP, new Public Relations Director of the Fox Cities ARC, recommends magnetic signs be stuck on cars driven by amateur communicators at public events.

Dave, KJ9I, achieved 7-band DXCC by completing contacts on 10 MHz and will next work on 12 meters.

Lloyd, N9BBQ, worked 100th plus country on 160 meters.

Jerry, N9AW, proudly displays his certificate for high-score single-operator Wisconsin 20-meter ARRL International DX CW contest. Jerry also helps Scouts learn about hamming.

Greater Milwaukee DX Association is looking

for some "fresh blood" in their club, contact K9CJ for transfusion details.

Badger Examiners February 20th exam, 1 p.m. at St. Nicholas Parish in Milwaukee, reservations with KB9G.

K9BED and W9UW are now on packet radio.

Steve, WB9ZRE, manager of pre-press operations in the Speed Queen Printing Department reports, "There are plenty of other amateurs here, besides me, there's KC9EY, KE9EJ, N9EDV and KA9CXF."

Scott Young, N9FZS, Hiram Percy Maxim winner, brought fellow students to the Friendly Fest and introduced them to an exciting aspect of ham radio. Scott's new address is Johnson Hall, Room 1206, Milwaukee School of Engineering, P.O. Box 353, Milwaukee, WI 53201.

Just married, Dave, KA9ITM, and his wife Donna, KA9VJU, live in a trailer near River Falls. Talk about being dedicated traffic handlers, they drive to a local park every Thursday, put up an antenna for 3722 KHz and then call to order the Wisconsin Novice Net - they operate as NCS on CW from their car. Such commitment is greatly appreciated, especially with the recent snow storms. How about giving Dave and Donna another check-in this week? (And how about sending a few photos to Badger State Smoke Signals? - k9zz)

Bruce, N9DGL, is Net Manager of the Wisconsin Novice Net. His daughter Krista, 10, learned code with help of computer programs Dad wrote. Krista uses code in school to pass secret messages to her friends (using ARL Radiogram numbers too?) Other N9DGL children, Lindsey, 6, and Joseph, 4, are showing some code interest. Bruce says, "Until one of them gets a license, I still could use a few more Net Control Stations."

All eight Section Leader Appointees will be getting a copy of the 1988 U.S. Callbook for their efforts during 1987.

CAND REPORT FOR NOVEMBER 1987 X 1062 MESSAGES IN 30 SESSIONS X D9RN REPRESENTED 100 PERCENT X WISCONSIN STATIONS KA9RII AND N9BGE - BILL WB5YDD ASSISTANT MANAGER

D9RN REPORT FOR NOVEMBER 1987 X 240 MESSAGES IN 60 SESSIONS WISCONSIN REPRESENTED 98 PERCENT BY KA9RII N9BGE W9CBE N9GJI W9ODV KA9VII KA9USV X 73 - DON NN9M MANAGER D9RN

UNIVERSAL TRAFFIC QUERIES

Gene Santoski, K9UTQ
Section Traffic Manager
Wisconsin Section-ARRL

Now you know all about nets, how they function and who runs them.

BUT HOW DO I CHECK INTO ONE OF THESE NETS?

Easy! As was stated earlier, a traffic net is a group of amateur operators gathers on a spot frequency for the purpose of exchanging third-party traffic on an organized basis.

There are many different nets with different procedures. For purpose of explanation I will present procedures for both phone and CW nets.

So okay, you are the average amateur who has had a license long enough to know what amateur operating is all about, and you decide to take the "plunge" into a Section Net and get your feet wet.

For those readers who are CW buffs, we in the Wisconsin Section are fortunate to have 4

nets on that mode. Those of you who are not real fluent with the key will be interested in knowing that there are two CW nets that operate a slow speed. They are the Wisconsin Novice Net and the Wisconsin Slow Speed Net. Newcomers are always most welcome on these nets and Net Controls will go out of their way to assist you in any way they can - I guarantee it!

All the CW nets use the same procedure but for example we will use the Wisconsin Slow Speed net. Net Control's call will be K9NCS and he would call up the net as follows:

QST QST QST CQ WSSN DE K9NCS THIS IS THE WISCONSIN SLOW SPEED NET A TRAFFIC NET WHICH IS PART OF THE WNA LTD AND THE ARRL NTS QND QNZ QNN DE K9NCS QNA 9RN REP QNI DE K9NCS K

Now, this may look like a lot of "Greck" to you but let me break the transmission down and explain each part to you.

You all know that QST means "calling all radio amateurs" and DE means "from". I will explain what WNA LTD is in a subsequent article. Then NCS sends a series of Q-signals which in order mean:

QND - This is a directed net (controlled by NCS)

QNZ - Zero beat your signal with mine

QNN - Net Control station is

QNA - Answer in pre-arranged order (Ninth Region Rep only)

Let's assume that there was a 9RN rep on this session and his call is W9XXX and that he has traffic for the net. He would check in as follows:

First he would just send a random letter or group of letters. NCS would respond by repeating the same group. This is done to get NCS attention.

Then W9XXX would send:

K9NCS DE W9XXX QNI FM 9RN QTC RACINE 1
MADISON 2 WAUSAU 1 K

What W9XXX is saying is that he is checking in (QNI) from Ninth Region with traffic (QTC) for Racine, Madison and Wausau stating how many pieces for each city.

NCS responds by:

W9XXX DE K9NCS R TNX AS

Which means he "rogers" the traffic list, thanks him and tells him to please wait (AS)

At this point, NCS will call for "general checkins" for the net by sending:

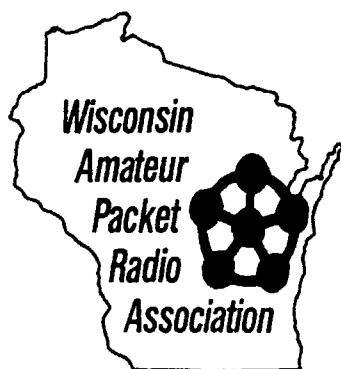
WSSN WSSN DE K9NCS NET LISTS TRAFFIC FOR RACINE MADISON ES WAUSAU WSSN QNI DE K9NCS K

Here's where you come in. You merely send a couple of dits or dahs or whatever and NCS will repeat indicating that he heard you. Then you send:

K9NCS DE K9UTQ QNI QRU GE K

Which means that you are checking in (QNI) with no traffic (QRU) and saying "good evening" (GE). That's all there is to it. Unless, of course you have traffic and then you would use

(continued on page 4, column 2)



THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association (WAPR)
P.O. Box 436 Cedarburg, Wisconsin 53012-0436

Steve Loeffler, WB9ZRE, Editor
123 W. Oshkosh St
Ripon, WI 54971

Minutes of WAPR Board Meeting - 12/6/87

Minutes of the meeting of the Board of Directors of the Wisconsin Amateur Packet Radio Association held this date in Germantown. The meeting was called to order at 9:45 am by Chairman Gregg Lengling, WD9DHI. Six members of the Board and three regular members were present. Treasurer Roy Hawkins, WA9KEC, reported a balance of \$654 and that all outstanding bills are paid. He reported that the treasury has received \$313, the remaining assets of the Wisconsin Area Teleprinter Society, which has been dissolved.

A discussion on the status of networking in the State centered on the NET/ROM developments which have occurred since our last meeting. Dan, WB9TYT, and Roy, WA9KEC, described the operation of the NET/ROM system currently in place and where they think it will progress in the foreseeable future. They are looking to establish NET/ROM links from Milwaukee to Madison and Green Bay as well as into Illinois. The Illinois link is dependent upon the plans of the Chicago area group which is leaning towards high speed 220 MHz links and TCP/IP. According to John, AG9V, Green Bay still needs support from their local packet community before a Net/Rom node can be funded there. Gregg, WD9DHI, said that sites in New Berlin and Burlington may be available to house digipeaters or NET/ROM nodes.

NIS traffic forwarding was discussed with emphasis on the expeditious forwarding of NIS traffic by the PBBS systems. The PBBS operators appear to be working this out among themselves and they stressed that their biggest concern was that the NIS traffic handling community be encouraged to retrieve traffic from the PBBSs for delivery in a timely manner. It was reported that Postal Zip Code routing NIS traffic is the method which is favored by the PBBS operators as the most workable. Carl, N9BYS, will contact the Wisconsin STM, K9UTQ, to initiate a liaison between WAPR and NIS.

A group in Madison has asked for the designation of a packet channel for TCP/IP operation in that area. The consensus was that 145.65 MHz should be recommended for that purpose.

Status of keyboard to keyboard activity on 145.03 MHz was reported by Rudy, KB9OK. He said that more digipeaters were needed, particularly in the direction of Illinois. Gregg mentioned the future availability of a good site for a digi near Burlington.

Education of amateurs on packet radio was discussed. Printed educational materials could be made available by WAPR either directly, through clubs or through Badger State Smoke Signals. Setting up a display booth at some of the swap-

ests was suggested, as was done at South Milwaukee in July. It was suggested that we put together a packet of material that could be handed out at swapfests. Dave, WA9POV, offered to put the material together and have it printed if the written text for the material is provided to him.

The program for the January 9, 1988 general meeting at the West Allis RAC Swapfest will include a brief business meeting followed by presentations on using NET/ROM, using a PBBS and NIS traffic handling.

The meeting was adjourned at 10:50 am.

Respectfully submitted,
Dave Knaus - WA9POV, Secretary

RiverLAN 145.09 Digi Update

Kent - W9LZQ reports that the MFJ 1270B TNC, G6 antenna, Motorola transceiver, crystals are ready for the installation. The power supply which was loaned by Walt - WD9GCR is still in kit form and anyone interested in putting the supply together should contact Walt. The hold-up to the project is the site location, for which the negotiations are proceeding slowly. As the winter winds begin to blow, it is doubtful if the digi will be operational before springtime.

N9BKJ BBS Spot Stats

Here are the stats for the first 12 days of December, I believe they reflect quite well the increased activity at this BBS. The last 12 days in November ran fairly close the stats for the same period in December.

Connects To N9BKJ.....	340
Total Hours In Use By Users....	31.5
Total Messages Entered.....	145
Total Messages Forwarded.....	81 (55.9%)
Forwards To W9WI.....	1 (1.2%)
Forwards To W8OLE.....	2 (2.5%)
Forwards To KD9NV.....	9 (11.1%)
Forwards To AG9V.....	15 (18.5%)
Forwards To WB9TYT.....	21 (25.9%)
Forwards To W9ZBD.....	33 (40.8%)
File Uploads.....	4
File Downloads.....	8
System Crashes.....	0
Help Requests.....	0

The one statistic that really stands out here is the request for help by users. The reason I point to it is due to the observations made here of the large number of users that struggle with the BBS after access not knowing what to do next, and who fail to access the extensive help system built into the BBS to assist them when in doubt or trouble. Within the first text that appears following an access, users are advised of the help system and what command(s) to issue to get assistance. I couldn't believe it when I saw

"O" requests for help based on user observations made here. Much effort was put into the development of the help system so that each user's access to this BBS or any other BBS would be a more enjoyable experience. I hope that they will make good use of this feature of the BBS when that feeling of hopelessness strikes as it always does for any new user (even the SYSOP has to take a peek at the help system now and then - HI! HI!).

This should give a fairly good idea of activity at N9BKJ.

73's de Bob, N9BKJ SYSOP

W9WI-1 145.01 Port To Close

Yeah, I know. But QRM is getting out of hand down here. Sometime around March 1 (I need to get a 145.07 digipeater running in the Baraboo area first) W9WI-1 BBS will be excluding non-BBSs from connecting to the 145.01 port. Mail forwarding to/from the UP and elsewhere will continue. Also, if you get word of a file or message on my BBS that you want to read, just drop me a note on W8OLE, I'll forward you a copy. Hopefully this change will make it easier for link users to have real-time QSOs without too many retries down here!

Doug - W9WI

NET/ROM PACLEN Parameter

When performing file transfers thru a NET/ROM node, adjust your TNC's PACLEN parameter to 236 as this is the required setting for maximum utilization thru a node. If your parameter is set to a higher value, say 256, the node will divide each of your frames into two frames when it leaves the node. One frame will have a length of 236 and the second frame will have a length of 20. This causes unnecessary overhead for the node and serves to slow down all area traffic.

MFJ-1270B TNC & Commercial Radios

When interfacing a MFJ-1270B TNC with a commercial surplus transceiver (a Mocom 35) I discovered that the 1200 hertz tone out of the MFJ was about 2/3 the level of the 2200 hertz tone at the radio port. Tracing it back into the TNC, I found that MFJ used a .0047 mfd. coupling capacitor at pin 2 of U16 - the tone generator chip. This value was too small, and had to be increased to .2 mfd (or more), in order that the 1200 / 2200 hertz levels would be closer to being equal at the radio's mike input. The capacitor is listed as C 71, and is located at the back of the TNC, between pin 1 of U16 and R76 (the level adjust potentiometer).

Commercial radios generally have very good audio pre-emphasis in their microph one amplifier circuits and feeding the "somewhat pre-empha-

sized" MFJ stock audio into one of these radios will result in too much pre-emphasis and poor performance. Ideally, you should feed relatively flat (level) audio into most commercial radio's microphone input circuits, and let the radio do the pre-emphasis.

Most "Ham" transceivers don't have, or have little pre-emphasis, so MFJ evidently designed some into the TNC by using the small value audio coupling capacitor. This is fine, if you are using an "average" Amateur transceiver, as evidently they assumed most users would.

de Tom - W8OLE PBBS - Marquette MI

More on MFJ-1270B Interfacing

I had the same problem with uneven levels using an ICOM IC-22U, I could not get enough deviation on the lower tone. 1200 hz = 1.5 khz and 2200 hz = 3.0 khz. Instead of changing C71, I installed jumper JMP J which parallels another .1 mfd (C57) with C71. After readjusting pot R76, I had equal deviation on both tones.

de Dave - KD9NV @ KD9NV BBS

TCP/IP Test Successful

Dan - W9NK & Doug - W9WI had a successful TCP/IP session on the evening of December 2. They conducted a two-way file transfer while simultaneously having a keyboard chat. The protocols are capable of several different simultaneous tasks. As Doug puts it, "Interesting stuff!".

New TCP/IP Release

I have downloaded the new TCP/IP release. This one includes full AX.25 level 2 support, including node-to-node acknowledgement (a la NET/ROM) AND the ability to hold normal AX.25 conversations from within the net software. This makes it possible to operate a KISS TNC in both TCP/IP and AX.25 modes simultaneously, without having to reboot the TNC or change ROMs. Also included is the new MBL to TCP/IP mail transfer task, and updated documentation.

The command structure of net has been changed and expanded, so some small changes to autoexec.net will be necessary. I have updated the sample autoexec in the distribution to reflect these changes.

Anyone wanting to receive a copy of the new release should contact me or connect directly. It requires three 360K diskettes (one is for source code).

In response to questions raised by the original TCP Q&A, and because of the release of the new TCP/IP software, I've updated the document and uploaded it as TCP-QNA2.TXT in the W9WI-1 Packet subdirectory.

73, Dan - W9NK

NET/ROM & TCP/IP

TCP/IP is coming online in Wisconsin and this looks like the right time to address an issue before it becomes a problem.

In the earlier days of VHF packeteering (geez, less than five years ago!), it was the custom to send a beacon out as far as it would go - there just weren't many stations around, very few, if any, dedicated digipeaters and bulletin boards were a dream of the future. Today, frequencies are becoming congested, dedicated digipeaters and bulletin boards are commonplace.

Methods are being devised to reduce frequency usage time and increase reliability. Old habits die hard and although beaconing on VHF has become obsolete, operators - new and old - continue to persist in it's use. It is still not uncommon to see a beacon cross an entire state and it is becoming the custom of NET/ROM operators to turn off their DIGIPEAT parameters in order to eliminate this longhaul beaconing.

Herein lies the issue; TCP/IP networking relies on unconnected Unnumbered Information (UI) frames to transmit information. With the NET/ROM node's DIGIPEAT parameter turned off, all UI frames are ignored by the node, whether the frames are TCP/IP frames or unwanted beacon UI frames.

Should NET/ROM operators continue to leave the DIGIPEAT parameter off, TCP/IP proponents will have to establish their own independent networks, resulting in a split in the packet community. If, on the other hand, node operators leave the DIGIPEAT on, unwanted beacons will be broadcast thru the nodes... unless... other methods are employed. For instance, the packet community at large gets into the habit of dropping a note to the beaconing station, informing him that his beaconing is not appreciated. What would you do if you received 5 - 10 curt daily messages to that effect? If after a couple of days, the station refused to remove his beacon, and after a warning to effect, the offending station could be removed from area BBS access for a pre-determined time. Would it cure the beaconing problem? There is only one way to find out.

It would be a shame to fragment the packet community by 'locking out' the growing TCP/IP popularity from the NET/ROM network. Compatibility is the key to the future. What is your opinion?

de Steve - WB9ZRE

De W1AW-BBS

It seems that the following information has to be spread around from time to time, as the need seems cyclical in nature. For weeks and sometimes months on end, all is well. Then, out of the blue, comes a barrage of messages to W1AW-PBBS requesting a variety of things. This, of course, is illegal.

So for the uninformed and those who just need a little refresher, FCC rule 97.110 states: "The transmission of business communications by an amateur radio station is prohibited except for emergency communications."

The following is what message number 1 on W1AW-PBBS states. Some of you other Sysops out there in Packetville may want to paraphrase it to suit the needs of your own boards.

Messages to ARRL HQ cannot be accepted via radio, be it on the packet network or by NTS, if they refer to the "regular business" of the League. While ARRL volunteers such as section officials can discuss their League activities over the air, such communication with paid employees of ARRL is illegal via amateur radio. In fact, no paid employee of ANY organization can discuss matters relating to his or her organization's business via amateur radio.

I ask all users of the packet network to consider the above when sending messages to ARRL/W1AW. As SYSOP of W1AW, I cannot deliver messages that fall into the category detailed above. So, what has already occurred is water

over the dam - but in the future, please direct any "business related correspondence" via the post office or commercial telecommunications media.

Jeff - WA1MBK, Sysop - W1AW

New Packet Newsletter Hits the Streets

I just received my premier issue of the new GrapeVINE newsletter, the official newsletter of the Georgia Radio Amateur Packet Enthusiasts Society (GRAPES) and the sixteen page issue is packet with info. It is filled with news about protocols, area projects, construction articles and the packet happenings in Georgia, Tennessee and Alabama. Their 56 kilobaud backbone network is in the beta testing stage (the modem designed by WA4DSY) and duplex digis are online. Contact GRAPES via PO Box 443, Duluth, GA 30136 for more information.

PROCOMM Flow Control Problem

PROCOMM is nice on the exterior but take note: When doing an ASCII upload with the XON/XOFF parameter enabled in the terminal setup menu, one is led to believe that XOFFs are honored correctly.

Alas they are not! To "recover from line noise", apparently, PROCOMM puts a timer on how long it will wait for XON before it decides on it's own that it's time to send more (and more and more).

I would not be surprised if use of PROCOMM with packet radio or for that matter any of the RS-232 boxes (PK-232 for example) causes strange things to happen because of this PROCOMM "Feature".

Howie - N2WX @ N2WX

PS: QMODEM and most other terminal programs do not share this ill conceived feature'.

Crosstalk & Packet

If you are having problems with your packet system locking up using Crosstalk XVI, the problem most likely is in the defined function keys of XTALK.

For some reason the XTALK people placed the name "Crosstalk - XVI" in FK 4 and this causes the system to lock up when it receives unusual characters.

To correct this problem simply delete the name "Crosstalk - XVI" from FK 4. I have left this function key undefined and have no more problem with packet transmissions using Crosstalk.

Marty - N3FHD

AN OLDIE FROM 1925

(From the Canadian Amateur) via ARNS

Return signals are only possible with a return circuit through the earth, according to Michael Pukin. "Every now and then we are told that wireless signals may someday be sent to Mars. The suggestions are unscientific for the simple reason that we cannot get a ground to Mars, and, therefore cannot take it into close partnership with our Hertzian oscillations. Without that partnership, there is no possibility of covering long distances." --Radio Doings, July 19, 1925. (tnx UPDATE)

Unusual Trivia Quiz

By Gene Santoski, K9UTQ
1220 18th Street South
Wisconsin Rapids WI 54494

QUIZ NO. 12 IN A SERIES OF 12 (FINAL QUIZ)

1. What country has the call letter prefix 5H3?
2. What is the 40 meter Novice subband?
3. Who manufactures the R-71A?
4. What Q-signal is used for asking "time"?
5. Who is the head of the ARRL DXCC Department?
6. What is the formula for the bandwidth of a CW signal?
7. What is the schematic symbol for a NAND gate?
8. What are undesired oscillations in an amplifier called?

9. The filing time is a required part of a message - true or false?
10. What is the radiation resistance of a Yagi antenna?

This is the final quiz. K9UTQ will be busily tabulating the responses to find the lucky dude (or dudess) who submitted the most correct answers, and he or she will receive a free copy of the \$15.00 ARRL Operating Manual. The answers to last month's quiz are on page 7 of this issue. And, of course, we'll pass along the name of the lucky winner, most likely in the next issue.



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